

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently Amended) A method of detecting DNA markers ~~in the 12q22-23 region~~, comprising:

providing a sample containing DNA from a human subject, wherein the DNA exists as acellular DNA in the subject; and

detecting one or more DNA markers selected from the group consisting of D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein said acellular DNA is from a serum sample or plasma sample.

2. (Original) The method of claim 1, wherein the sample is a serum sample.

3. (Original) The method of claim 1, wherein the sample is a plasma sample.

4. (Canceled)

5. (Canceled)

6. (Currently Amended) A method of detecting melanoma, comprising:
providing a sample containing DNA from a human subject, wherein the DNA exists as acellular DNA in the subject; and

analyzing DNA markers in the 12q22-23 region comprising D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein ~~LOH~~ loss of heterozygosity of any of D12S1657, D12S393, D12S1706, and D12S346 is indicative of melanoma, and wherein said acellular DNA is from a serum sample or plasma sample.

7. (Original) The method of claim 6, wherein the sample is a serum sample.

8. (Original) The method of claim 6, wherein the sample is a plasma sample.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Previously presented) The method of claim 6, wherein the melanoma is a primary melanoma.

13. (Previously presented) The method of claim 6, wherein the melanoma is a metastatic melanoma.

14-16. (Canceled)

17-19. (Canceled)

20. (Canceled)

21. (Canceled)

22-25. (Canceled)

26. (Currently Amended) A method of monitoring progression of melanoma ~~or colon cancer~~, comprising:

providing a melanoma ~~or colon cancer~~-tissue sample ~~or a body fluid sample~~ containing DNA from a human subject suffering from melanoma ~~or colon cancer~~; and

analyzing DNA markers comprising D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein ~~LOH~~ loss of heterozygosity of any of D12S1657, D12S393, D12S1706, and D12S346 indicates the progression of melanoma in said subject ~~that the probability for the subject to suffer from a progressing cancer is higher than the probability for the subject to suffer from a non-progressing cancer.~~

27. (Original) The method of claim 26, wherein the sample is a serum sample.

28. (Original) The method of claim 26, wherein the sample is a plasma sample.

29. (Canceled)

30. (Canceled)

31-34. (Canceled)

35. (Currently Amended) A method of predicting the efficacy of a melanoma biochemotherapy, comprising:

providing a melanoma tissue sample ~~or a body fluid sample~~ containing DNA from a human subject suffering from stage IV melanoma prior to administration of a biochemotherapy; and

analyzing DNA markers comprising D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein ~~LOH~~ loss of heterozygosity of any of D12S1657, D12S393, D12S1706, and D12S346 indicates poor efficacy of the biochemotherapy in the subject, and wherein said biochemotherapy comprises dacarbazine, cisplatin, vinblastin, interferon, alpha-2b, IL-2, and tamoxifen.

36. (Original) The method of claim 35, wherein the sample is a serum sample.

37. (Original) The method of claim 35, wherein the sample is a plasma sample.

38. (Canceled)

39. (Canceled)

40-43. (Canceled)

44. (Currently Amended) A method of determining the probability of melanoma survival, comprising:

providing a melanoma tissue sample ~~or a body fluid sample~~ containing DNA from a human subject suffering from a stage III or IV melanoma; and

analyzing DNA markers comprising D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein ~~LOH~~ loss of heterozygosity of any of D12S1657, D12S393, D12S1706, and D12S346 indicates that the subject has a low probability of surviving melanoma survival ~~if the subject has not responded to a biochemotherapy.~~

45. (Original) The method of claim 44, wherein the sample is a tumor sample.

46. (Original) The method of claim 44, wherein the sample is a serum sample.

47. (Original) The method of claim 44, wherein the sample is a plasma sample.

48. (Canceled)

49. (Canceled)

50-51. (Canceled)

52. (Previously presented) The method of claim 44, wherein the melanoma is an RLM melanoma.

53. (Previously presented) The method of claim 44, wherein the melanoma is an ITM melanoma.

54-57. (Canceled)

58. (Currently Amended) A method of determining the probability of responsiveness to a round melanoma biochemotherapy, comprising:

providing a melanoma tissue sample ~~or a body fluid sample~~ containing DNA from a human subject suffering from stage IV melanoma prior to administration of a biochemotherapy; and

analyzing DNA markers comprising D12S1657, D12S393, D12S1706, and D12S346 on the DNA, wherein ~~LOH~~ loss of heterozygosity of any of D12S1657, D12S393, D12S1706, and D12S346 indicates a low probability of responsiveness to the biochemotherapy in the subject, and wherein said biochemotherapy comprises dacarbazine, cisplatin, vinblastin, interferon, alpha-2b, IL-2, and tamoxifen.

59. (Original) The method of claim 58, wherein the sample is a tumor sample.

60. (Original) The method of claim 58, wherein the sample is a serum sample.

61. (Original) The method of claim 58, wherein the sample is a plasma sample.

62. (Canceled)

63. (Canceled)

64-73. (Canceled)

74. (Previously presented) The method of claim 1, wherein the DNA markers consist of the combination of D12S1657, D12S393, D12S1706, and D12S346.

75-80. (Canceled)

81. (Previously presented) The method of claim 1, wherein the sample is a blood sample.

82. (Previously presented) The method of claim 6, wherein the sample is a blood sample.

83-84. (Canceled)

85. (Previously presented) The method of claim 26, wherein the DNA exists as acellular DNA in the subject.

86. (Previously presented) The method of claim 26, wherein the sample is a blood sample.

87. (Previously presented) The method of claim 35, wherein the DNA exists as acellular DNA in the subject.

88. (Currently amended) The method of claim 35, wherein the sample is a blood sample.

89. (Previously presented) The method of claim 44, wherein the DNA exists as acellular DNA in the subject.

90. (Previously presented) The method of claim 44, wherein the sample is a blood sample.

91. (Previously presented) The method of claim 58, wherein the DNA exists as acellular DNA in the subject.

92. (Previously presented) The method of claim 58, wherein the sample is a blood sample.

93-96. (Canceled)